MCO 134

HOSPITAL BUILDING NOTE

PSYCHIATRIC WARD TYPE 2 AND PRE-DISCHARGE (HOSTEL TYPE) WARD

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Psychiatric Ward Type 2 and Pre-discharge (Hostel Type) Ward

Part I

Psychiatric Ward Type 2

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An addendum to Appendix E of Hospital Building Note No. 2, *The Cost of Hospital Buildings*, which sets out cost recommendations for Psychiatric Ward Type 2 and Pre-discharge (Hostel Type) Ward is supplied with this Building Note.

I. Scope

1. This Building Note gives guidance on a suitable ward unit to accommodate 30 medium grade severely subnormal or low grade subnormal patients, who are ambulant and in need of treatment, or supervision, and a certain amount of habit or social training. It is suitable for a wide range of patient behaviour patterns, so that changes in patient demands may be met without structural alterations to the accommodation.

2. This Building Note should be read in conjunction with Building Note No. 30, Accommodation for Psychiatric Patients.

II. General considerations

3. The siting of psychiatric wards generally is dealt with in Building Note No. 30. Briefly, a domestic zone will be designed where wards of various types will form a compact development. Sub-divisions within this zone will separate categories of patients according to their age, sex, or behaviour. Each group may have its wards arranged into precincts or around open courts, approached by cul-de-sac roads off the main circulation routes. Wards for children will not be sited amongst those for adults but associated with their own school or training facilities.

4. Layout will be to a considerably higher density than has been the practice in the old isolated hospitals, and it is important that courtyards and areas between buildings should be carefully designed to play a part in the treatment of the patients accommodated in the unit. Where it is necessary to separate one group of patients from another, visual and other barriers such as shrubs, trees, terraces, etc., which can be sited close to the wards, are often sufficient, but a fence may be necessary to prevent wandering. Specifications for landscaping should take into account the cost of maintenance; this can be high where hedges and small lawns are involved.

5. Ward units should accommodate 30 patients and should be single storey where adequate land is available; where a greater density is unavoidable a reasonable proportion of the accommodation should be on the ground floor for those who cannot use the stairs. In single-storey accommodation, where advantage can be taken of the use of some roof lighting and ventilation, economies might be made by planning in depth. The construction of the ward unit should allow for changes in the disposition of internal partitions, particularly in the dormitory areas, so that different arrangements for patients may be achieved without affecting the basic structure of the building.

6. Limited provision will be required for individual patients who are noisy or in other ways disturbing to others. The easy replacement of glazing should be considered and armoured glass is desirable for windows and the upper panels of doors to single rooms which are used by disturbed patients. Doors in accommodation for patient use should be designed to allow the passage of wheelchairs where required.

7. Some patients may require habit training and there should therefore be easy access to the lavatory accommodation from the wards and day spaces. The floors in the sanitary accommodation should be able to withstand the free use of water for cleaning. All rooms used by patients should have non-slip floors which can be easily cleaned.

Zones of activity within the ward unit

8. Activities in the ward unit will require certain rooms to be linked together. The zones for these activities should be established at the outset because they will affect the overall form of the unit, its orientation, and its siting in relation to roads, landscape and any adjacent buildings. The rooms which might be grouped together are as follows:

Group (A) Entrance, staff and visitors' rooms, linen, clothes and ward stores, ward pantry.

Group (B) Ward (dormitory area), nurses' station, night toilet.

Group (C) Patients' entrance, sanitary facilities, cloakroom, changing-room, bathrooms.

Group (D) Dining room, day room(s), sister's office, play and equipment store, outdoor exercise area.

9. Ways in which these groups of rooms may be arranged to form a ward unit are shown in Figures 1 (*a*) and (*b*). Figure 2 shows a diagrammatic layout of a courtyard plan and Figure 3 a "deep" plan.

10. Group (A), the administrative section, is not normally used by patients. It may be an advantage to place these rooms on the north side so that full use may be made of sunshine on the other three aspects where gardens and play areas may be wanted. The diagrammatic layout has assumed that the approach road to the main entrance would also provide access to the ward pantry.

11. Group (B), principally the dormitory area, should be planned so that it can be used either as one clear space, or as a series of fully or partially divided spaces, according to the needs of the patients. To allow for this the load bearing structure should preferably be in the external walls. The dormitory area should be adjacent to the main sanitary facilities

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but if this is not possible, additional toilets should be provided for night use only.

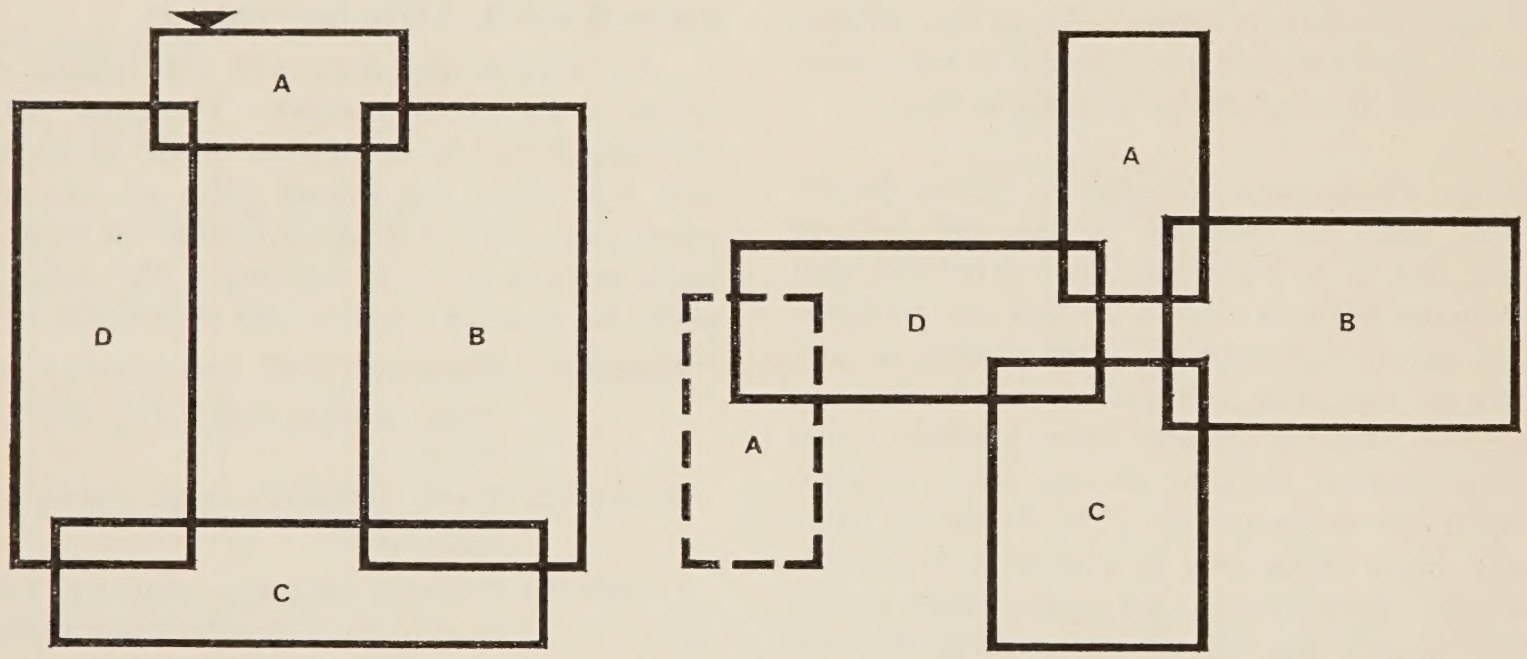
12. Group (C), the sanitary facilities, should be linked to the accommodation in groups (B) and (D) with internal spaces arranged for use in the sequence they are required, whether patients enter from the ward, the day/dining spaces, or from outside. Owing to the differences in sanitary requirements for certain patients, this group of rooms may contain alternative fittings.

13. Group (D) consists of the day accommodation, sister's office, dining room and play and equipment store. The patients' entrance and the cloakroom in group (C) should be planned close to the group (D) rooms. Partitions to separate different (day room) activities may be needed in this area; the load bearing structure should preferably be in the outside walls. Exceptionally, additional space may be required, adjacent to the day space, for rehabilitation activities by patients who cannot make use of the rehabilitation work centre. This is included in the list of additional accommodation.

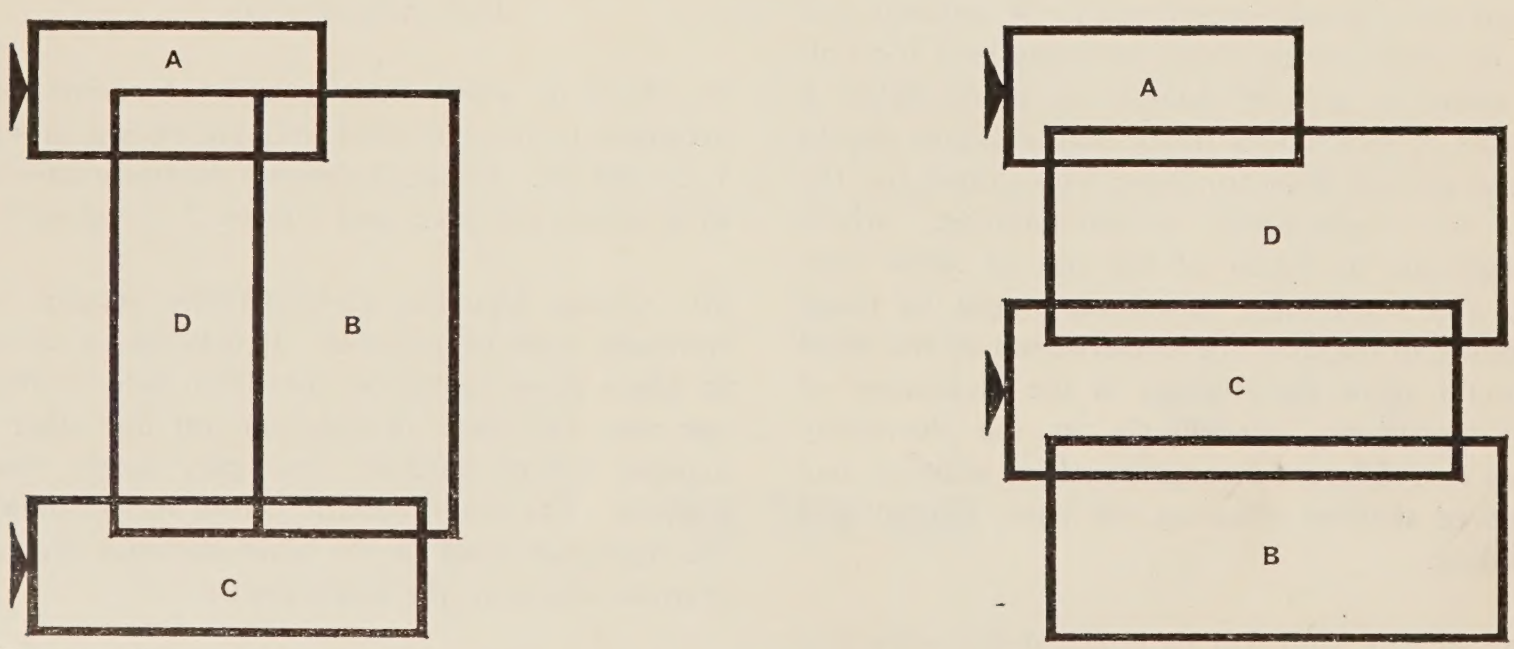
14. Where two-storey development is required, some alternative arrangements of the accommodation are as follows:

(*a*) Accommodation for 30 patients may be provided on each of two floors, each floor becoming self-sufficient. In this case the planning principles in Figures 1 (*a*) and 2 apply.

(*b*) Ward unit accommodation is divided between two storeys, with the administrative area, day spaces, and some sanitary facilities on the ground floor, and their dormitories, ward stores, washing facilities, and night toilets above. This cannot be considered to be fully adaptable to changing patient needs and examples of this type should be limited in number.



(*a*) Courtyard or cruciform plans.



(*b*) " Deep " plans.

FIGURE 1. Demonstration of possible layout for a ward unit.
Key to arrangement of rooms:
Group (A) Entrance, staff and visitors' rooms, linen, clothes and ward stores, ward pantry.
Group (B) Ward (dormitory area), nurses' station, night toilet.
Group (C) Patients' entrance, sanitary facilities, cloakroom, changing room, bathrooms.
Group (D) Dining room, day room(s), sister's office, play and equipment store, outdoor exercise area.

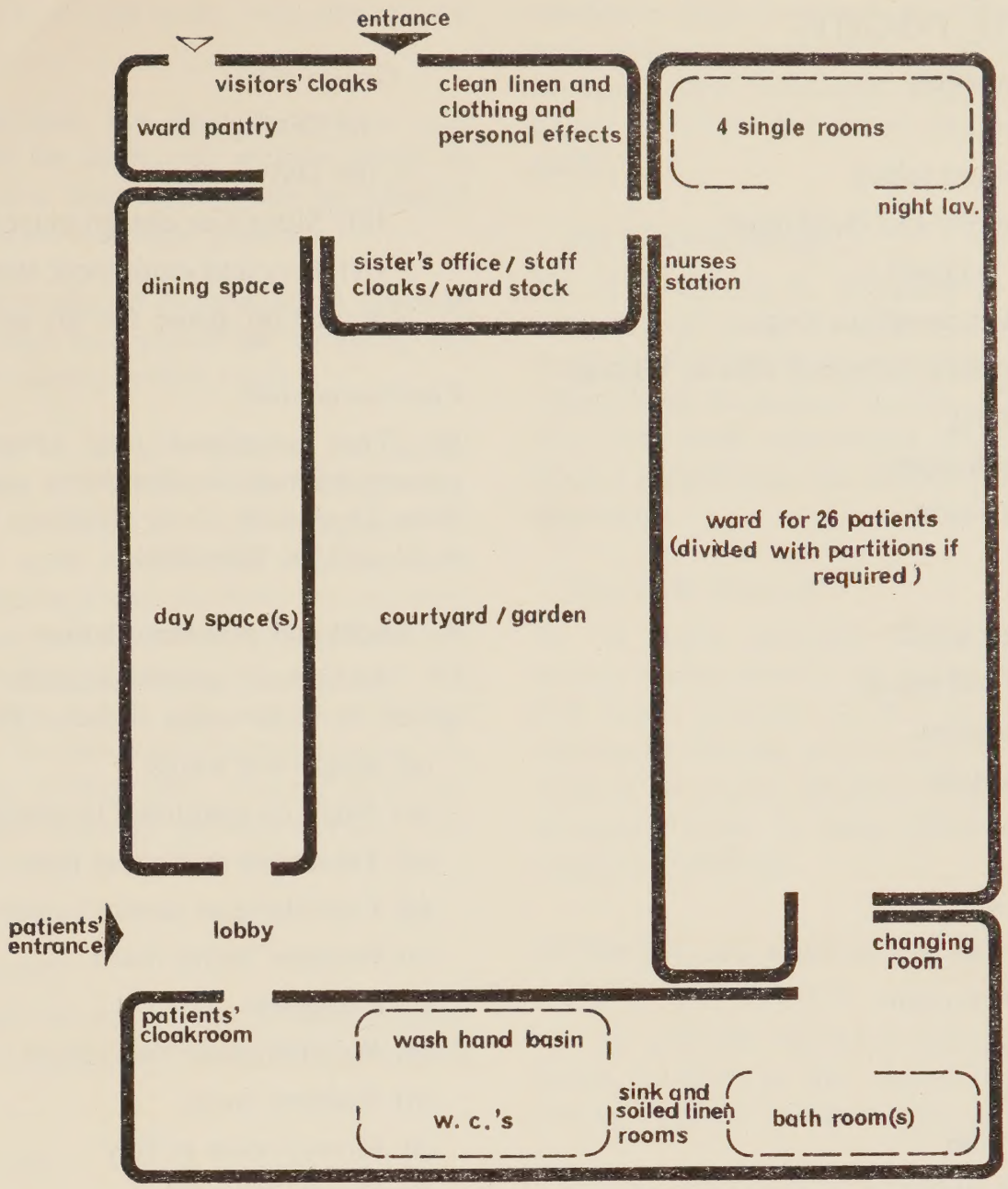


FIGURE 2. Diagrammatic layout of courtyard plan.

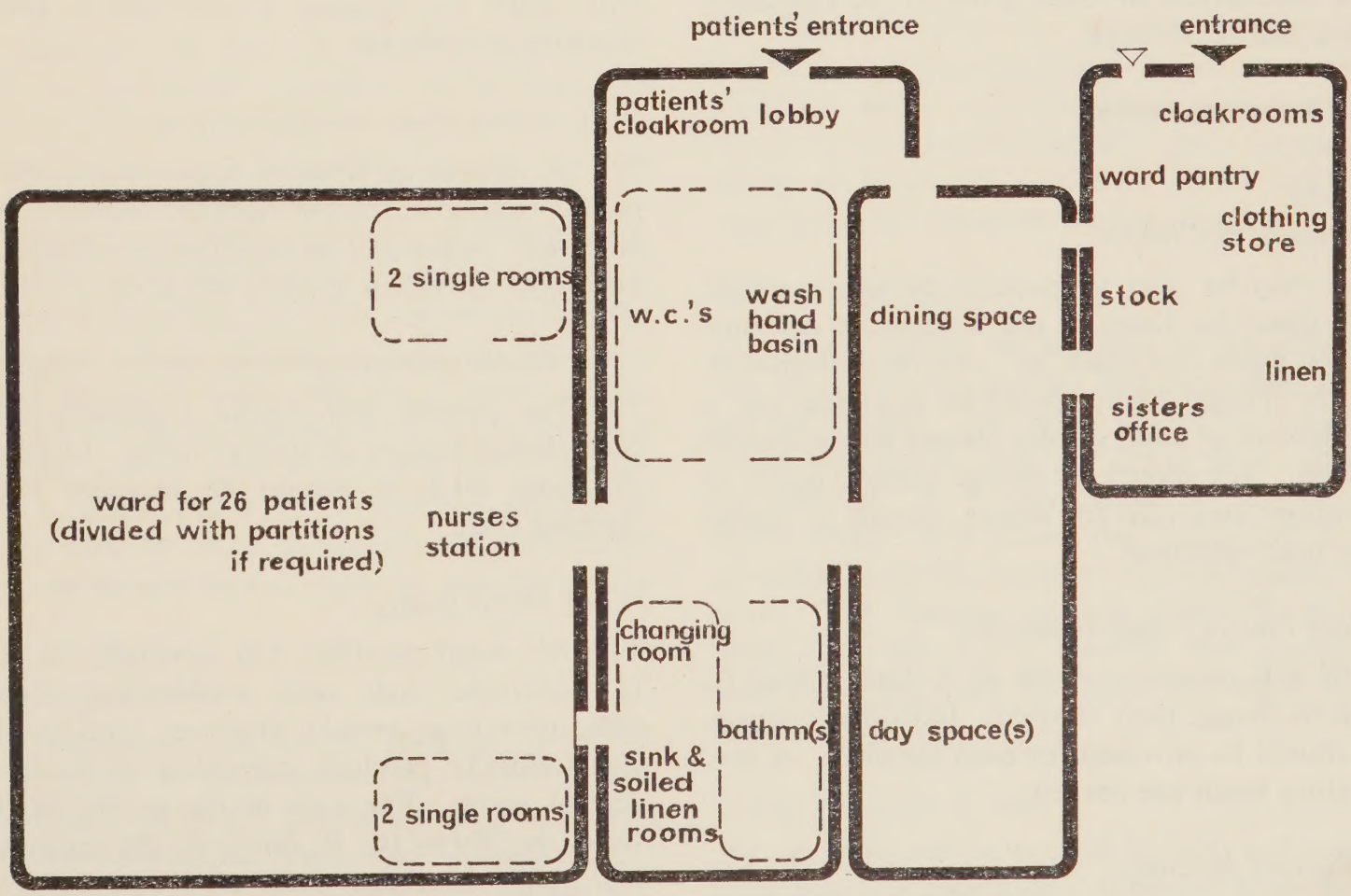


FIGURE 3. Diagrammatic layout of a "deep" plan.

III. List of rooms

A. Basic accommodation

15. *Group (A)*

(i) Entrance and lobby
(ii) Staff lavatory and cloakroom
(iii) Visitors' lavatory
(iv) Clean linen reception room
(v) Clothing store, personal effects, luggage
(vi) Ward pantry
(vii) Ward stockroom
(viii) Cleaners' room

Group (B)

(i) Single-bed wards
(ii) Multiple-bed wards
(iii) Nurses' station
(iv) Night lavatory

Group (C)

(i) Patients' entrance
(ii) Patients' sanitary facilities, etc.
(iii) Soiled linen room
(iv) Sink room
(v) Bathroom
(vi) Drying room
(vii) Changing room
(viii) Cloakroom

Group (D)

(i) Dining room
(ii) Day room(s)
(iii) Sister's or charge nurse's office
(iv) Play and equipment store

Circulation space for all groups above.

Functional unit

16. The functional unit selected for the basic accommodation in this Note and the related Cost Note (Appendix E to Building Note No. 2) is the ward unit for 30 patients.

B. Additional accommodation

17. Additional accommodation which may be required in some cases includes the following:

(*a*) Single-bed wards
(*b*) Night or additional lavatories
(*c*) Treatment or clinical room
(*d*) Consulting or doctor's room
(*e*) Patients' utility room
(*f*) Bathroom
(*g*) Rehabilitation work room
(*h*) Visitors' room
(*i*) Flower room or bay
(*j*) Bicycle store
(*k*) Car park.

IV. Description of rooms

18. The recommended areas given in the Appendix apply to a unit of 30 beds.

A. Basic accommodation

Group (A)

(i) *Entrance and lobby*

19. This may be used by patients though it would be more usual for them to use a separate entrance where their shoes and coats, etc., can be conveniently stored. A draught lobby should be provided and a bay for flowers or other display should be considered in this area. The sister's (or charge nurse's) office, to which visitors may turn for advice, should be visible from the main entrance.

(ii) *Staff lavatory and cloakroom*

20. Staff will require a room of at least 120 sq. ft. in which to change their clothing. Individual, secure, lockers should be provided for each member. A w.c. and lavatory basin are needed.

(iii) *Visitors' lavatory*

21. One w.c. and one lavatory basin are required with space for hanging a coat and a shelf for a handbag, parcels, etc.

(iv) *Clean linen reception room*

22. A reserve of linen is required for the longest period during which the hospital supply department is closed. Space will be required for baskets, trolleys and racks on which to store the linen.

(v) *Clothing store, personal effects, luggage*

23. The patients will require a clothing store fitted with clothes lockers or storage racks. Luggage space of about 40 sq. ft. should be included within the clothing store.

(vi) *Ward pantry*

24. All ward pantries will normally be equipped to undertake their own washing-up as transport difficulties over certain distances (and road conditions) usually preclude collection of crockery to a central point. The area of the pantry in this case would be 200 sq. ft. If, however, the transport problem (high breakage rate, etc.) can be overcome, central washing-up should be considered, and a

smaller ward pantry of 120 sq. ft. will suffice (see Appendix).

25. The route between the delivery vehicle and ward pantry should be short and without steps or steep gradients so that food trolleys can be wheeled directly into and out of the ward pantry.

26. The ward pantry should have a hatch opening on to the dining space and access for wheeling the food trolley into the dining or bed areas.

27. The equipment to be provided in the larger pantry should include a hot closet with boiling rings, a toaster or grill, a refrigerator, an instantaneous water boiler and a wash basin. One stainless steel sink and a small dish-washing machine are required with a total of 8 feet run of drainer arranged with a 2 ft. (maximum) section between the sink and the dish-washing machine and a 3 ft. section at either end. Alternatively the dish-washing machine may be replaced by a heated rinsing sink. Storage space for crockery, cutlery and beverage ingredients, etc., will be needed, together with space for tray racks and a service trolley.

(vii) *Ward stockroom*

28. This is required for the storage of new hospital clothing, other ward commodities and bulk cleaning supplies.

(viii) *Cleaners' room*

29. A cleaners' room is required containing a bucket sink with hot and cold running water, drainer, and space for mechanical cleaning equipment, cleaning utensils, etc.

Group (B)

(i) *Single-bed wards*

30. A minimum of four of these rooms may be required for privileged patients, more disturbed patients needing segregation, or for unduly noisy patients who have to be kept away from the general wards at night. These rooms could also be used to accommodate temporarily any suspected infectious cases pending their removal for treatment elsewhere. When disturbed patients are to be accommodated the doors to these wards should be hung to open outwards and should be fitted with glazed upper panels. The window should be provided with armoured glass and designed so that there are no external corners or projections against which the patient may strike himself. Care must be taken to provide adequate ventilation by mechanical means when the window is kept shut.

(ii) *Multiple-bed wards*

31. The dormitory should be designed either to contain a series of 4-bed bays with solid or half-glazed partitions or to be completely open with beds arranged in rows as in traditional "Nightingale" ward layouts. Beds should be placed at an average of 7 feet centres. About 70 sq. ft. per patient is needed to include space for bedside fittings, clothes and personal possessions. Where supervision is necessary the partitions may have glazed upper panels to allow the nurse to see the whole ward easily.

(iii) *Nurses' station*

32. This should be designed as a partially glazed enclosure of about 60 sq. ft. containing a desk. The single rooms should be under reasonably close supervision from the nurses' station. Some patient groups may not need supervision from a nurses' station (even at night) and the enclosure should therefore be removable.

(iv) *Night lavatory*

33. A night lavatory containing a w.c. and a lavatory basin should be placed adjacent to a single-bed ward, planned so that it can either be used exclusively by one patient (e.g. a suspected infectious case) or by any of the patients in the ward for whom at night it may be more convenient than the main sanitary provisions.

Group (C)

(i) *Patients' entrance*

34. A patients' entrance will be required, with a lobby, leading to the cloakrooms, boot and shoe rooms, sanitary facilities, day spaces and wards.

(ii) *Patients' sanitary facilities*

35. Easy access to the patients' lavatories is essential from the wards, day rooms, and dining rooms. An area of 550 square feet will be required for the following:

(*a*) *W.C.'s*

36. Space for one w.c. to four patients should be provided. One compartment should be wide enough to permit entry of a wheelchair and accompanying nurse; doors should preferably open outwards. The design of doors and partitions should be capable of adaptation for different patient groups.

(*b*) *Lavatory basins*

37. These should be provided in the proportion of one to every four patients and positioned to encourage cleanliness. The basins should be spaced to take chairs and permit standing space for a nurse beside the patient. It is convenient to provide a shelf beside rather than above the basins and it may be desirable to fix the basins at various heights from the floor. The washing facilities should be planned en suite with the w.c.'s; shelves and storage space should be provided for patients' toilet equipment, towels, etc.

(iii) *Soiled linen room*

38. A room will be needed for bins and soiled linen bags awaiting collection. (Infected linen is referred to in paragraph 39 on sink room below.) The soiled

linen room should be adjacent to the washing and changing rooms and should be accessible from outside the building. Some mechanical ventilation will be required in this room.

(iv) *Sink room*

39. A general purpose sink room will be required containing a sink and drainer, a hopper sink, lavatory basin and a bench working area with cupboards beneath. The sink room will serve as a sluice room but the general use of bed-pans and urinals is not envisaged in these wards. About 50 sq. ft. is recommended. A further 30 sq. ft. will be required in some wards where equipment is needed in the sink room for initial treatment of infected clothing or linen.

(v) *Bathroom*

40. Three baths and one shower cubicle fitted with a flexible spray attachment are required; one of the baths should be free standing. Curtains should normally be provided between baths but the plan should allow for future requirements of solid panel partitions between baths. Wide wastes may be required in the baths and shower tray. Not less than 280 sq. ft. will be needed for the bathroom and shower cubicle.

(vi) *Drying room*

41. A room with facilities for airing towels and washed garments will be required. This should be near the changing room.

(vii) *Changing room*

42. An area of about 280 sq. ft. is required for dressing and undressing and storage of day clothes at night, adjacent to the bathrooms and equipped with ventilated lockers, benches, and clothes hooks. For easy supervision the latter should be ranged on the outside walls, leaving a clear space in the centre for benches, etc. The soiled linen room should be easily accessible from this room.

(viii) *Cloakroom*

43. A room will be required for storing outdoor shoes, overcoats, etc. This should be adjacent to the patients' entrance to the ward. Facilities will be required for drying wet overcoats.

Group (D)

(i) *Dining room*

44. The dining room should be large enough to provide meals for the patients at tables for one, two or four places. At least 15 sq. ft. per patient is required. It may be used for recreation purposes outside meal hours by some patient groups.

(ii) *Day room(s)*

45. A minimum of 27 sq. ft. per patient is required. This space may be sub-divided by non-structural partitions into separate rooms for various activities according to patients' needs. A high standard of interior decoration and furnishing should be provided in these rooms although with some patient groups durability may be the prime consideration. A television point is needed. Access to the sanitary facilities should be provided.

(iii) *Sister's or charge nurse's office*

46. The office is used for interviewing staff and relatives and preparing reports. The room should be centrally planned in association with the patients' day acommodation and, if possible, near the main entrance. It should contain a desk or table, chairs, bookcase, medicine cupboard and filing cabinet.

(iv) *Play and equipment store*

47. This should be sited with the day space.

Circulation space for all groups above

48. Corridors should be well lit and ventilated and should be a minimum of 8 ft. wide. All openings for patients' use should be wide enough to pass a trolley or chair, and all corners should allow for manoeuvring them. A space of 3 sq. ft. per patient should be allowed, if required, for trolleys and chairs; this should be provided in the form of bays or alcoves in suitable positions in the ward and sanitary accommodation. Staircase flights and landings should be at least 5 ft. wide with hand-rails on both sides.

B. Additional accommodation

(*a*) *Single-bed wards*

49. It may be considered necessary to provide a higher proportion of single-bed wards than that recommended in paragraph 30 above and in this case additional space for ward accommodation will be required. Rooms required for privilege patients may, however, be smaller than the area of 110 sq. ft. recommended.

(*b*) *Night or additional lavatories*

50. Under certain conditions the provision of an extra night toilet close to a dormitory may be required. One w.c. and one lavatory basin may be needed.

(*c*) *Treatment or clinical room*

51. This may be required where medical examinations and minor treatment are carried out and where portable electro-medical equipment is used. Space will be required for a dressings trolley, couch, storage, basin or sink with elbow-action taps, work-top, and storage for sterile packs, etc. An area of 170 sq. ft. will be needed.

(*d*) *Consulting or doctor's room*

52. This should be reasonably free from noise interference and equipped with a lavatory basin, a desk, two or three chairs and a couch. An area of

170 sq. ft. will be required. Building Note No. 12, Out-patient Department, shows alternative arrangements.

(*e*) *Patients' utility room*

53. A sink with double draining boards, and ironing facilities, will be needed in this room for use by patients who wash their own clothes; wards for female patients will require two sinks. The drying room should be adjacent. Female patients may be given additional spray attachments to one of the sinks so that it can be used for hair washing. 100 square feet will be required.

(*f*) *Bathroom*

54. An extra bathroom may be required either similar to that described in paragraph 40 (110 sq. ft.) or, to conform to a more domestic standard, of 50 sq. ft. with the bath against a wall.

(*g*) *Rehabilitation work room*

55. When the patients are elderly and infirm or otherwise too severely physically or mentally handicapped to leave the wards for work in the rehabilitation centre, an extension to the day room will be required so that patients may be trained and given work actually on the ward and without interfering with the other ward amenities. This additional space will be equipped with work benches and a small store room. A total of 300 sq. ft. will be required.

(*h*) *Visitors' room*

56. While some patients may receive visitors in the hospital's social centre, others may not be able to leave the ward unit and, for them, a visitors' room will be necessary. This should be furnished as a lounge. During periods of the day when visitors are not present this room may be used as a (quiet) day room. An area of 170 square feet will be required.

(*i*) *Flower room or bay*

57. Space for flower or other decorative displays may be required in the day rooms or associated with the entrance lobby. 40 sq. ft. should be provided.

(*j*) *Bicycle store*

58. Space to park up to eight bicycles under shelter may be required for staff use. Effective means of locking the bicycles should be fitted to the cycle stands.

(*k*) *Car park*

59. A paved area sufficient to park four vehicles may be required close to the ward.

V. Engineering services

60. Engineering services should be designed and installed to ensure ease of maintenance and the minimum interruption of services and disturbance to the working of the department while repairs and maintenance are being carried out.

61. Special care should be taken to avoid features which might cause injury to patients.

62. Where it is impracticable to make use of the main hospital incinerator, a single incinerator is to be preferred to a number of local units, particularly with regard to safety aspects.

63. Facilities should be provided for the easy installation of meters should they at any time be required.

64. Fire protection of the building may influence the design of engineering services, especially ventilation schemes. Due regard should therefore be given to these requirements in the early stages of design.

Mechanical services

Heating

65. The heating system should be designed for continuous operation and to be available during the summer for use on cold summer days.

66. The following table gives recommended heating design temperatures and ventilation rates based on an outside temperature of 30°F:

	Temperature	*Air changes per hour*
Day room, wards, and night lavatories	70°F.	3
Treatment or clinical room ...	70°F.	3*
Bathrooms	70°F.	2
Patients' lavatories, changing rooms, drying rooms, consulting or doctor's room, dining room, rehabilitation work room	65°F.	3
Sister's or charge nurse's office, nurses' station, corridors, patients' utility room and visitors' room ...	65°F.	2
Entrance lobby	60°F.	3
Staff and visitors' lavatories, cloakroom, ward pantry, clean linen reception room, clothing store, cleaners' room and flower room	60°F	2
Ward stock room and equipment store	50°F.	½

67. A conventional hot water heating system with radiators or recessed convectors provides a generally satisfactory form of heating. For wards, day rooms and patients' lavatories, however, there are medical advantages in having warm floors: this can be achieved with embedded floor panels; the floor

* Where the treatment room is used for minor surgery it is desirable to provide six air changes per hour.

surface temperature should not be more than 75°F. Because of this limitation of the floor surface temperature, particularly for a single-storey building, floor heating may not be entirely satisfactory unless it is used in association with another form of heating.

68. Electric under-floor heating, run at off-peak hours, is not likely to be a satisfactory form of heating for this type of accommodation and it should not be installed without careful consideration of the characteristics of this form of heating and the particular conditions.

69. Radiators and convectors should be placed below windows and against exposed walls to counteract cold air currents, and should have sufficient clear space beneath to facilitate floor cleaning by machines.

70. Where there are roof lights, clerestoreys and roof vents, the heating system should be designed to prevent cold down-draughts from them. Exposed heating piping at high level should not be used however: a better alternative is to have embedded coils or flush panels in the sides of the openings.

71. Hot water radiators and pipes installed in areas used by patients should be provided with guards, as some patients may have defective sensations of heat and could be injured by hot surfaces. Guarding of radiators and pipework is often unsightly and requires more cleaning and maintenance, and for this reason convectors are preferable in these areas; pipework being concealed where practicable.

72. Fan convectors having fresh air inlets and air filters, and controlled by a time switch, have advantages in dormitory areas where additional ventilation may be required to remove smells.

73. Where ceiling heating systems are to be used they should conform to the recommendations of the Medical Research Council's Environmental Research Unit which may be found in the "Guide to Current Practice" of the Institution of Heating and Ventilating Engineers. Where ceiling heating systems having removable panels are considered, the possibility of interference by the patients should not be disregarded. In ceiling heated rooms the incoming air from windows should not be directed at the ceiling.

74. Electric heaters will not normally be required, but where they are provided, and where patients can come into contact with them, the heaters should have low surface temperatures or be suitably guarded, the electric elements being totally enclosed.

Ventilation

75. Treatment rooms used for minor surgery should be mechanically ventilated at a rate of six air changes per hour, the fresh air being filtered and warmed before being introduced into the room at high level through suitable diffusers designed and positioned to avoid draughts. Discharge should be by means of a suitably placed low level grille with a quiet lightweight flap valve in the ducting to outside; when the door is closed a slightly pressurised condition in the room should be maintained.

76. Filters of 95 per cent efficiency down to 5 microns are satisfactory but additional coarse prefilters are necessary in districts where the air is dirty.

77. Mechanical extract at high level to outside should be provided in the ward pantry. Mechanical extract may also be required in single-bed wards and day rooms where adequate air changes are required without having to open windows.

78. Internal rooms should be mechanically ventilated to suit their individual requirements.

79. Because of the heavy demand of habit training, patients' lavatories require a good level of extract ventilation and for all lavatories where they are situated internally, mechanical extract ventilation is necessary.

80. External discharges should be protected against back pressure from the wind. Air inlet grilles are necessary where the ventilation is mechanical extract only.

81. Soiled linen storage room should be unheated and naturally ventilated to the outside of the building.

Hot and cold water and drinking water services

82. These are normally provided by connection to the main services of the hospital. Hot water storage capacity should be based on meeting the maximum requirements for two hours, and the rating of the calorifier battery should be calculated on a three-hour recovery period, having regard also to the heat losses from the mains. The cold water storage should be sufficient for 24 hours' requirements.

83. Baths and lavatory basins for patients should be fitted with both quick fill and emptying fittings. The hot water temperature should be controlled at a maximum temperature of 100°F. as a precaution against scalding. Where possible a range of these hot water fittings may be supplied through a thermostatically controlled mixing valve. Alternatively, consideration might be given to a low temperature hot water distribution from the calorifier to reduce maintenance, and the dependence on a number of mixing valves, in which case a separate hot water circuit at normal temperature would be required for staff lavatories, sink room and ward servery.

84. The taps for patients' lavatory basins may be push operated but in some cases (where it is necessary for training purposes, etc.) they may be normal pillar taps. Lever arm taps of the type

having a mixed flow outlet will be required where aseptic conditions make this necessary.

85. Normal pillar taps should be provided elsewhere. Where taps and valves which are not for patients' use are accessible to them and are likely to be tampered with, consideration should be given to the use of key operation.

86. The hot water circulation system should also serve bathroom towel rails (a built-in radiator may be provided if at a safe temperature) and the heating coils in drying rooms and clean linen reception room.

87. A drinking water tap should be provided in the ward pantry and may also be required near to the medicine cupboard.

88. One sink in the ward pantry should be provided with facilities for a hot rinse, but where large amounts of crockery have to be washed and there is no central wash-up, consideration should be given to the provision of a dish-washing machine which rinses at a temperature of 180/190°F.

Sterilising equipment

89. Where a central sterile supply service is not provided, and a supply of sterile syringes, etc., cannot be provided from a neighbouring hospital, a small high-pressure steam steriliser may be required in the treatment room for the sterilising of syringes, small bowls and instruments. The steriliser may be electrically powered but should be in accordance with B.S.3233 and 3219.

90. In the sink room there may be a need for the provision of a small machine for sluicing and disinfecting foul linen before it is placed in a soiled linen room.

Gas

91. Gas points should be regarded as a potential hazard and only provided where a gas supply is essential. A gas service may be required in the ward servery.

Piped oxygen and suction

92. Piped oxygen and suction will not normally be required.

Electrical installation

93. The electrical installation will include wiring and equipment for general and special lighting, socket outlets, emergency electrical services, heating, ventilating, telephones, clock system and a bell push system for external doors.

94. In areas to which patients have access special consideration must be given to safety in the selection and positioning of electrical fittings, accessories, equipment and appliances.

95. The electrical supply will generally be provided by a sub-main circuit from the main intake and distribution centre. Local distribution boards should be sited to minimise the length of circuit wiring. They should be easily reached from a standing position and housed in ventilated locked cupboards preferably accessible from corridors; boards not in locked cupboards should be fitted with locks. H.R.C. fuses are recommended and in addition to the provision of spare ways and fuses space should be allowed for future additional units.

96. Conduits and cables should be concealed, service ducts being provided wherever practicable and the external wiring either P.V.C. cables in galvanised screwed conduits or M.I.M.C. cables.

Artificial lighting

97. Specialised lighting is largely confined to wards and treatment rooms; for other areas lighting should follow standard modern practice. Lighting fittings should have a low glare index, not be dust collecting and should be readily accessible for maintenance and not difficult to clean.

98. The following table gives recommended values of general illumination for various rooms:

Accommodation	*Average lumens/ft.² recommended at working level*
Treatment room or clinical room, consulting or doctor's room and rehabilitation work room ...	20
Day and dining rooms, nurses' station, sister's or charge nurse's office	15
Wards (no bedhead lighting), ward pantry, visitors' room, changing room, bathrooms, sink room, patients' utility room	10
Lavatories, cloakroom, cleaners' room, soiled linen room, stores, clean linen reception room, drying room, flower room, entrance ...	7*
Corridors	7*†
Bicycle store	Nominal

Lighting in wards

99. The avoidance of glare is important and a glare index of not more than 13 is recommended. All lights should be screened from the beds and any part of a lighting fitting visible from a bed should have a brightness of not more than one foot lambert. These restrictions should be applied also to lighting in corridors, circulation space, etc., outside the ward but visible from the bed through unscreened glazing.

100. Tungsten filament lighting is usual but fluorescent lighting has been found to be suitable, where lamps have acceptable colour rendering. Lighting fittings in single-bed wards should be flush mounted in the ceiling and be protected by heavy glass.

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* Standard given is required at floor level.
† This figure may be increased where adjacent intensities are high.

101. Night lighting should provide an indirect illumination on the bed of 0·01 lumens per square foot for adult wards and 0·1 lumens per square foot for children's wards, and for the rest of the ward just sufficient light to enable staff to move easily around. Night lights of low wattage tungsten filament may be incorporated in the general lighting fittings. An illumination of 3 lumens per square foot should be adequate for the nurse's desk provided that the nurse does not have frequently to enter ancillary rooms lighted to higher standards of illumination. A table lamp is not recommended for the nurse's desk.

102. Switching for the ward lighting, which may include separate or two-way and off switches for the low intensity night lighting, should be grouped together in a lockable cupboard at a convenient position outside the wards, usually the nurses' station.

Other lighting

103. In addition to general lighting, a separately switched, wall or ceiling mounted, adjustable spotlight will be required in the treatment room.

104. Lighting fittings in the ward servery should be carefully arranged to give direct lighting over the sink and wash-up area.

105. Fittings in day and dining rooms should be chosen to give a pleasing effect.

106. Corridor lighting fittings should be of the enclosed type and staircase lights sited to enable easy cleaning and maintenance.

107. Local switch control (except in the wards) is generally satisfactory. The switch positions for staircase lights should be carefully selected.

108. Where the building is detached, external and road lighting will be required and should be controlled by a time switch. External fittings should be weatherproof.

Mains voltage outlets

109. Sufficient 13A. universal type switched shuttered socket outlets, connected to ring or spur circuits, should be provided to allow each portable appliance which is likely to be in use at the same time to be supplied from a separate outlet. In wards and other spaces occupied by patients, there may be advantages from a safety aspect in having the circuit controlled by a double pole master switch with a neon indicator light within or near the nurses' station to isolate the sockets when they are not required.

110. Fused spur boxes are considered to be unsafe for use in areas occupied by the patients. For areas not occupied by the patients fixed appliances rated up to 13A. may be permanently connected to 13A. fused spur boxes. Appliances rated in excess of 13A. should be permanently connected to separate final sub-circuits and independently switched.

111. The following socket outlet distribution is suggested:

Treatment room	2 twin outlets, plus provision for fixed electrical apparatus.
Day room	1 twin outlet, plus one outlet for T.V.
Single-bed ward	1 twin outlet.
Multi-bed ward	1 single outlet shared between two beds plus 1 outlet for general use.
Nurses' station	1 twin outlet.
Sister's or charge nurse's office	1 twin outlet.
Ward pantry	To suit the number of appliances plus 1 or 2 for future requirements (depending on the size of room). Outlets should include neon type indicating lights.
Patients' utility Visitors' room	1 twin outlet.
Consulting or doctor's room	2 twin outlets.
Corridors	Outlets to be provided to allow for the convenient use of domestic cleaning appliances having a flexible lead assumed to be 30 ft. long.

112. In order to reduce interference by patients, the socket outlets are usually placed at high level out of easy reach, but where this is not possible and there is the likelihood of damage or tampering, locked cupboards may be necessary. Non-luminous heating appliances should have a neon indicating light to show when they are in use; the light may be in either the appliance socket outlet, or plug top.

Emergency electrical services

113. Guidance on the provision of emergency electrical supplies in hospitals is given in the Ministry's Technical Memorandum No. 11, Hospital Emergency Electrical Services.

114. Emergency lighting Grade (*b*) to about half the normal standards should be provided in the general working areas to enable essential activities to be carried on, and skeleton lighting provided for corridors and staircases to allow the essential movement of staff and patients with reasonable safety.

115. Battery operated lanterns should be provided for use in general nursing areas which have no installed emergency lighting.

116. Socket outlets supplied from the emergency electrical services will not normally be necessary.

Telephones

117. Telephone facilities for internal and external calls are required in the doctor's room and the sister's room. The latter should be connected in parallel with an indicating light which is easily visible at each nurses' station. The telephone for the sister's room should be fitted with a quiet bell which when desired may be switched out of circuit.

118. A call box or booth with G.P.O. telephone for the use of visitors will normally be available in or adjacent to the main entrance to the hospital. Conduit and trunking for telephone cables should be concealed.

Electric clocks

119. An electric clock will normally be required in the sister's room, treatment room, in the main entrance, day room and dining room. The clock in the treatment room should have a sweep second pointer.

Staff location systems

120. A wired staff location system or an induction system may be provided as part of the general staff location system of the hospital. The system should enable staff to be called at night without disturbing the patients.

Television and radio

121. Socket outlets, aerials and adequate earthing arrangements should be provided in day rooms for T.V. sets. Similar provision in wards and day rooms may be made for radio sets but there are advantages in having a central radio system with loudspeakers in the wards and day spaces and the controls at the nurses' station or other convenient place.

122. Sets should, where practicable, be mounted so that patients cannot readily interfere with them and for a central radio system the loudspeakers should be at high level and have a pre-set volume control.

123. It may be necessary to connect the socket outlets for the sets to a separate circuit although experience shows that these sockets are rarely interfered with. It is also advisable to fit a suitable guard to the T.V. set controls.

Fire alarms and fire fighting equipment

124. Information on fire alarms and extinguishers is given in B.S. Codes of Practice and in HM(56)36, Hospital Fire Precautions. Advice on the fire fighting installation proposed should be sought from the local fire authority.

125. Key operated alarm points have advantages over the break-glass type alarm buttons which are prone to deliberate breakages.

APPENDIX

Recommended minimum areas for rooms in basic accommodation

Description of rooms	*Sq. ft.*
Group A	
(i) Entrance and lobby	90
(ii) Staff lavatory and cloakroom	120
(iii) Visitors' lavatory	40
(iv) Clean linen reception room	100
(v) Clothing store, etc.	150
(vi) Ward pantry	200†
(vii) Ward stockroom	100
(viii) Cleaners' room	50
Group B	
(i) Single-bed wards	110
(ii) Multiple-bed wards—per patient	70
(iii) Nurses' station	60
(iv) Night lavatory	50
Group C	
(i) Patients' entrance	
(ii) Patients' sanitary facilities	550
(iii) Soiled linen room	60
(iv) Sink room	50
(v) Bathroom and shower cubicle	280
(vi) Drying room	50
(vii) Changing room	280
(viii) Cloakroom	180
Group D	
(i) Dining room (per patient)	15
(ii) Day room(s) (per patient)	27
(iii) Sister's or charge nurse's office	120
(iv) Play and equipment store	120

Circulation space to include for 8 ft. wide corridors, 3 sq. ft. per patient for trolley and chair bays where required, 5 ft. wide stairs plus sufficient space for meter cupboards, etc.

† 120 sq. ft. only is required if central washing-up facilities are provided.

Part II

Pre-discharge (Hostel Type) Ward

CONTENTS

I Scope.

II General considerations.

III List of rooms.

IV Description of rooms.

V Engineering services.

Appendix.

I. Scope

1. This accommodation will be suitable for 30 of the higher grade subnormal adult patients who have become well enough for their early return to the community to be likely. They should be able to take some responsibility for their own domestic affairs and, while still classified as in-patients, should be encouraged to live in accommodation which is more closely related to the character of hostels in the community.

II. General considerations

2. The ward (or wards) will be sited quite separately from those used by more severely handicapped patients and should be associated more closely with the links between the hospital and the community (for example, near the main entrance).

3. The planning should be such as to sub-divide the patients' sleeping accommodation into small groups of bedrooms (say from 5 to 8 patients), each group having its own ancillary accommodation adjacent to it. Little or no night supervision will be necessary. The day and dining rooms will be shared by all the patients in the ward unit and these, as well as the bedrooms, should be planned so as to take advantage of pleasant aspects. There should be access for vehicles and space for turning and parking.

4. The building may be two-storied and it will generally be arranged so that most of the day spaces are on the ground floor. Provision should be made for at least one group of bedrooms to be on the ground floor so that any patients who are physically handicapped may avoid the use of the stairs.

5. The patients will go out of their ward for hospital community activities in the rehabilitation, work, or social centres. Alternatively, if comparable facilities are available outside the hospital (in local authority centres, etc.) the patients may go freely to and from the hospital during the day.

Zones of activity within the ward unit

6. The rooms can be grouped as follows according to their functions and the activities for which they are required (see Figure 1):

Group (A) Entrance, office, stores, staff room, ward pantry.

Group (B) Day rooms, cloakroom facilities, dining space.

Group (C) Bedrooms, sanitary facilities, linen stores.

Group (A) Entrance, office, stores, staff room, ward pantry

7. These rooms are mainly for the use of the staff. The entrance should give direct access to the sets of rooms in category (B) and thence to category (C). The main approach road should lead directly to this zone.

Group (B) Day rooms, cloakroom facilities, dining space

8. Day accommodation should be partially sub-divided to cater for different needs of the patients. The dining space may optionally form part of a larger day room and should be adjacent to the ward pantry. A cloakroom will be required with some sanitary facilities, and hooks for topcoats, etc.

Group (C) Bedrooms, sanitary facilities, linen stores

9. Bedrooms should be arranged to accommodate separate groups of 5 to 8 patients. Most of the accommodation will consist of single bedrooms, but a number of partitions may be omitted to provide four-bedded rooms as required. The sanitary facilities should normally be sited to serve each separate group of rooms, but some adjustment may be necessary where a bathroom or blanket store, etc., is shared between two groups (see Figure 2).

III. List of rooms

A. Basic accommodation

10. The following accommodation should be provided in all cases:

Group (A)

(i) Entrance
(ii) Nurse's office
(iii) Staff lavatory and cloakroom
(iv) General store
(v) Interview room
(vi) Ward pantry

Group (B)

(i) Day rooms (including dining space)
(ii) Patients' cloakrooms and day toilets
(iii) Cleaners' equipment store

Group (C)

(i) Single bedrooms

(ii) Four-bedded rooms

(iii) Linen and blanket stores

(iv) Box rooms

(v) Cleaners' cupboards

(vi) Sanitary facilities

(vii) Utility rooms

Circulation space for all groups above.

Functional unit

11. The functional unit selected for the basic accommodation in this Note and the related Cost Note (Appendix E to Building Note No. 2) is the ward unit for 30 patients.

B. Additional accommodation

12. Additional accommodation which may be required in some cases may include:

(i) Games or implement store

(ii) Bicycle store

(iii) Staff lavatory and cloakroom.

IV. Description of rooms

A. Basic accommodation

Group (A)

(i) *Entrance*

13. There should be a draught lobby, and an area forming part of the main circulation space with a number of chairs for waiting visitors. There should be direct view of the nurse's office from the entrance so that visitors may know where to make enquiries.

(ii) *Nurse's office*

14. This is to be used by the nurse in charge for interviewing staff and relatives and preparing reports. The room should be sited centrally, in association with the entrance, and should contain a desk or table, chairs, bookcase, and filing cabinet.

(iii) *Staff lavatory and cloakroom*

15. A cloakroom will be required with individual secure lockers for each member of the staff. It should contain a w.c. and a lavatory basin.

(iv) *General store*

16. A small store will be required near the nurse's office for keeping a stock of miscellaneous items (stationery, cleaning materials, etc.).

(v) *Interview room*

17. This may be used by the staff (including visiting doctor, psychiatric social worker, etc.) or visitors.

(vi) *Ward pantry*

18. All ward pantries will normally be equipped to undertake their own washing-up as transport difficulties over certain distances (and road conditions) usually preclude collection of crockery to a central point. The area of the pantry in this case would be 200 sq. ft. If, however, the transport problem (high breakage rate, etc.) can be overcome, central washing-up should be considered, and a smaller ward pantry of 120 sq. ft. will suffice (see Appendix).

19. The route between the delivery vehicle and ward pantry should be short and without steps or steep gradients so that food trolleys can be wheeled directly into and out of the ward pantry.

The ward pantry should have a hatch opening on to the dining space and access for wheeling the food trolley into the dining areas.

20. The equipment to be provided in the larger pantry should include a hot closet with boiling rings, a toaster or grill, a refrigerator, an instantaneous water boiler and a wash basin. One stainless steel sink and a small dish-washing machine are required with a total of 8 feet run of drainer arranged with a 2 feet (maximum) section between the sink and the dish-washing machine and a 3 feet section at either end. Alternatively the dish-washing machine may be replaced by a heated rinsing sink. Storage space for crockery, cutlery, and beverage ingredients, etc., will be needed, together with space for tray racks and a service trolley. If patients regularly require meals out of ordinary hours because of work done outside the hospital, the ward pantry may be equipped with a table cooker in lieu of the boiling rings and toaster or grill.

Group (B)

(i) *Day rooms (including dining space)*

21. The area required for day space should be calculated on the basis of 27 sq. ft. per patient. An additional 13 sq. ft. per patient should be allowed for a dining space forming part of the day room. This should have a hatch connecting it to the kitchen servery.

(ii) *Patients' cloakrooms and day toilets*

22. A cloakroom, near the hostel entrance and associated with the patients' day rooms, is required for outdoor clothes, shoes, etc. This should be provided with coat hooks (or hangers), benches and shoe lockers and should be adequately heated and ventilated for drying wet garments, etc. W.c's and lavatory basins should be placed adjacent to the cloakrooms in the ratio of 1 w.c. and 1 basin to every 10 patients.

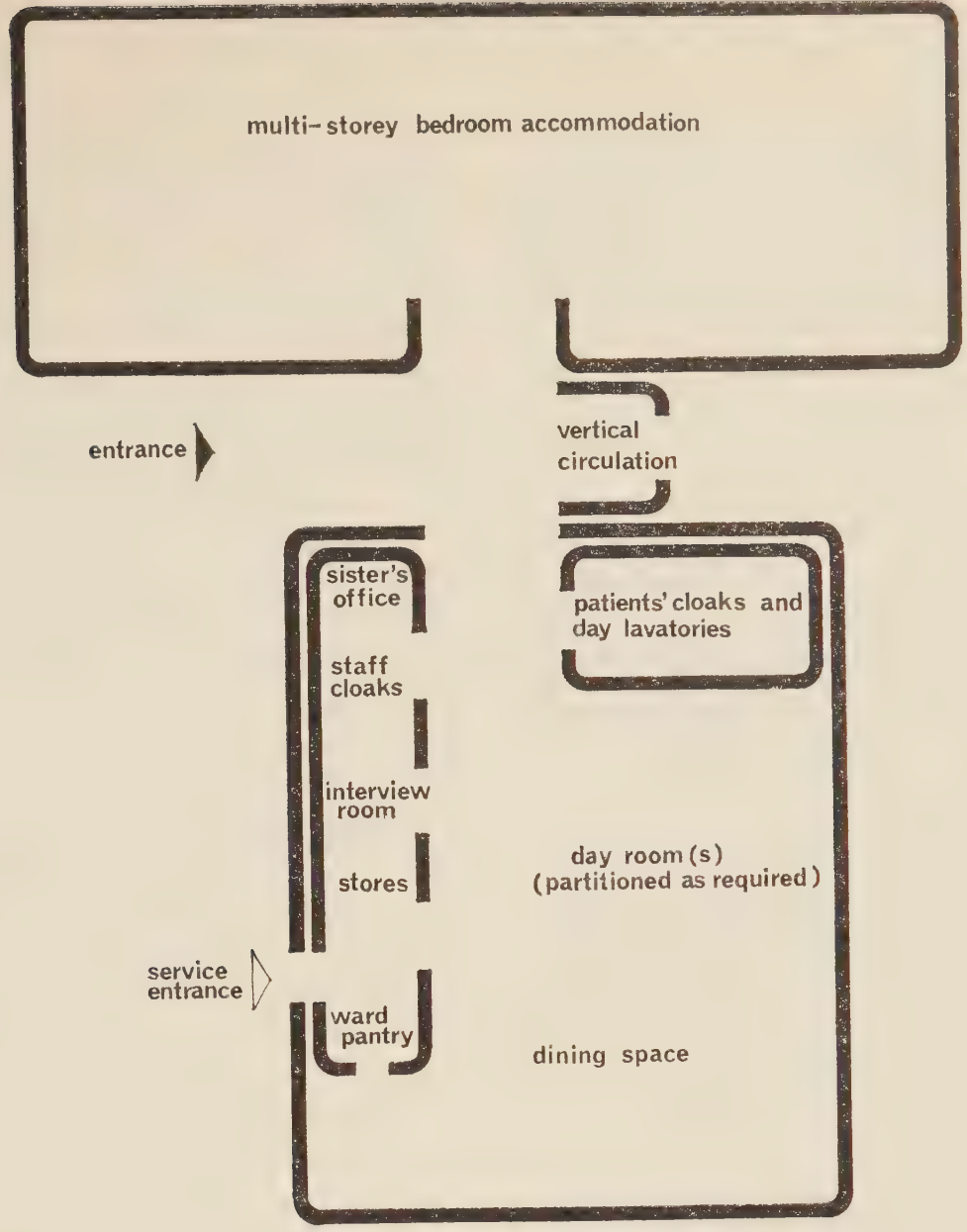

FIGURE 1. Diagrammatic layout of pre-discharge ward unit.

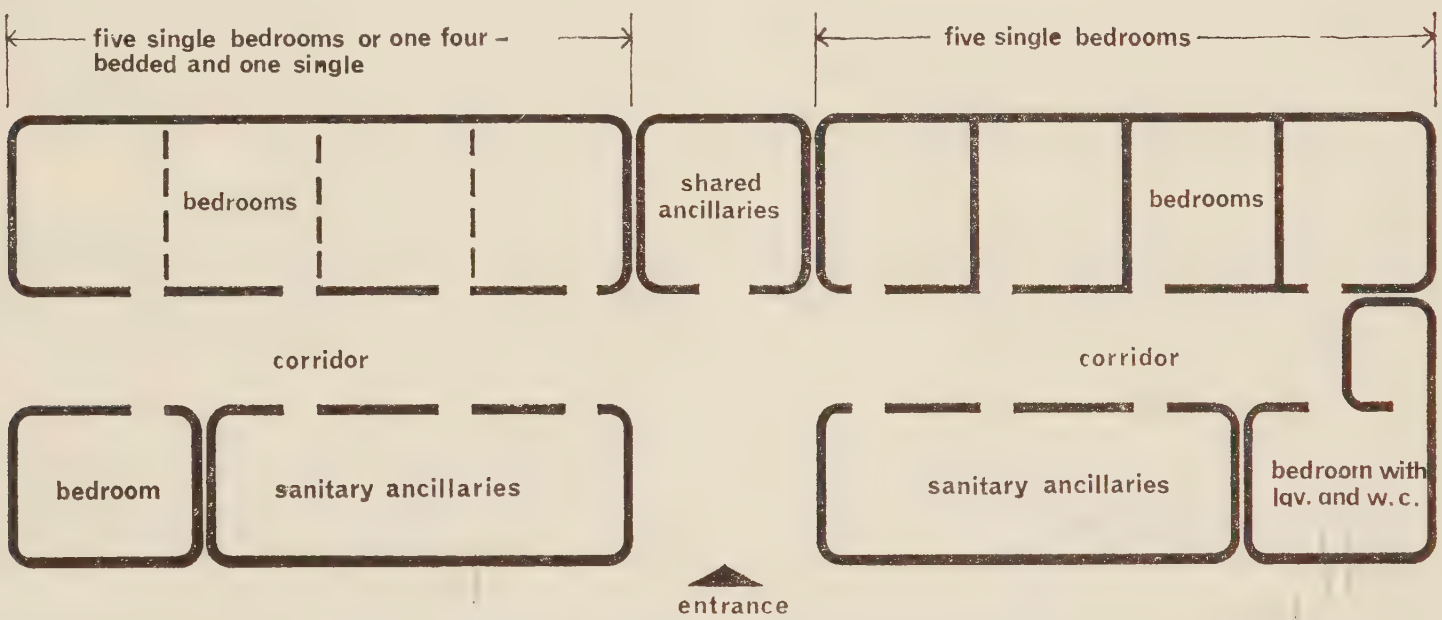

FIGURE 2. Diagrammatic layout of bedroom and ancillary accommodation.

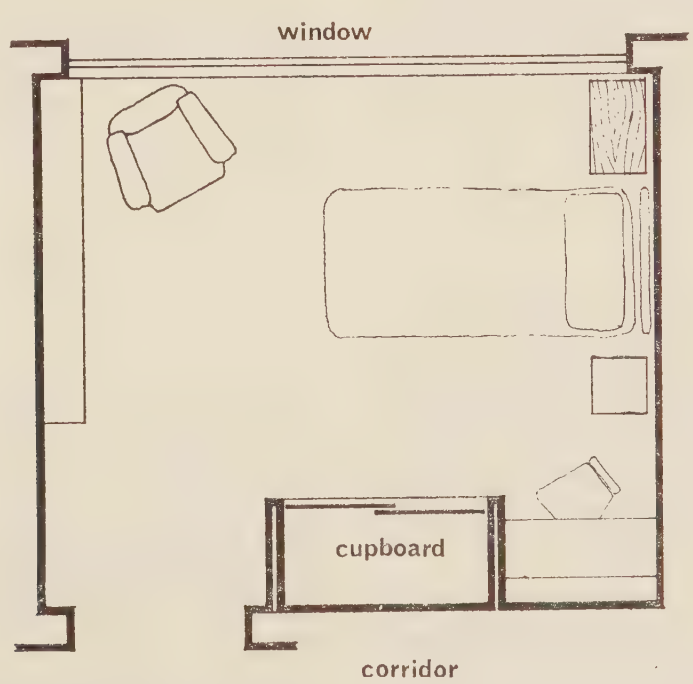

FIGURE 3. Typical layout for a single bedroom.

(iii) *Cleaners' equipment store*

23. A cleaners' equipment store is required. It should contain a bucket sink with hot and cold water, a drainer, and space for mechanical cleaning equipment, cleaning utensils, etc.

Group (C)

(i) *Single bedrooms*

24. Each room should be furnished with a bed, clothes cupboard, chest of drawers, mirror, small bedside table and chair, etc. (See Figure 3.) One single room in the ward unit should be adjacent to sanitary facilities which may be used exclusively by the patient in that room (see paragraph 30).

(ii) *Four-bedded rooms*

25. These should be planned so that future conversion to 4 single bedrooms is possible. Some visual privacy should be provided for each patient either by means of curtains or the siting of cupboards between beds. (See Figure 2.) Two four-bedded rooms should be planned for a ward of 30 patients.

(iii) *Linen and blanket stores*

26. Provision is required for a ward linen and blanket store for every 15 patients. The link between the store and a supply vehicle outside should be short.

(iv) *Box rooms*

27. Patients' articles of luggage and other bulky items should be stored on shelves in a box room. One room is needed for every 15 patients.

(v) *Cleaners' cupboards*

Two of these will be required, each conveniently sited for about half the bedrooms.

(vi) *Sanitary facilities*

28. W.c's and washing and bathing facilities should be grouped with the patients' bedrooms. For every 5 patients there should be 1 w.c. and 3 lavatory basins; either one bathroom or a shower may be shared by up to 10 patients.

29. Each of the grouped lavatory basins should be sited so that a curtained cubicle 3 ft. × 4 ft., may be formed round it. Bathrooms should be about 35 sq. ft. in area with the bath against one wall and should be fitted with a shelf and hooks. Showers should be planned with an adjacent changing bay within an area of 20 sq. ft. Patients will be expected to keep their toilet accessories by their beds.

30. In addition, a room of 25 sq. ft. is required containing one w.c. and one lavatory basin. This room should be adjacent to one of the single rooms for the possible exclusive use by its occupant (see paragraph 24).

(vii) *Utility rooms*

31. One utility room should be provided for every 15 patients which will be used for laundering personal clothing and, in the case of female patients, for hair washing, etc. The room should be fitted with a sink, draining board, washing machine, wringer, drying rack, and ironing facilities.

Circulation space for all groups above

32. Patients accommodation will be divided into sections by corridors leading off central rooms to groups of bedrooms, etc. To reduce draughts and noise transmission these should be fitted with doors at each end and all external doors should have a draught lobby.

B. Additional accommodation

(i) *Games or implement store*

33. A store of 100 sq. ft. may be needed for bulky equipment for games (table tennis, etc.), garden furniture, and gardening implements. This should be near the day rooms.

(ii) *Bicycle store*

34. This may be required to accommodate up to 12 bicycles for use by patients and staff. It should be under cover and near the entrance.

(iii) *Staff lavatory and cloakroom*

35. Extra provision may be required if staff of both sexes are likely to be on the ward. This would be similar to that provided in the basic accommodation. (See paragraph 15.)

V. Engineering services

36. This accommodation is planned for higher grade subnormal adult patients awaiting early discharge, therefore the need for any exceptional safety requirements in respect of the engineering services is not considered necessary.

37. Engineering services should be so designed and installed as to ensure the minimum interruption of services and disturbance to the working of the department while repairs and maintenance are being carried out.

38. Facilities should be provided for easy installation of meters should they at any time be required.

39. Fire protection of the building may influence the design of engineering services, especially ventila-

tion schemes. Due regard should therefore be given to these requirements in the early stages of design.

Mechanical services

Heating and ventilation

40. The heating system should be designed for continuous operation. The following table gives recommended heating design temperature and ventilation rates based on an outside temperature of 30°F:

	Temperature	*Air changes per hour*
Bathrooms	70°F	2
Day room (including dining space)	65°F	3
Nurse's office, interview room and sanitary facilities ...	65°F	2
Bedrooms	65°F	1½
Entrance	60°F	3
Utility room, circulation spaces, staff lavatory and cloakroom, patients' cloakroom and day toilets, and ward pantry	60°F	2
Linen and blanket stores ...	60°F	½
General store, box room and cleaners' equipment store ...	50°F	½

41. These conditions are usually met by the conventional hot water heating system using panel radiators or convectors.

42. Radiators and convectors should be placed below windows and against exposed walls to counteract cold air currents, and should have enough space beneath them to allow domestic cleaning machines to be used.

43. Floor heating may not be entirely satisfactory and should only be used in association with another form of heating; the floor surface temperatures should not be more than 75°F.

44. Electric off-peak heating systems may be unsuitable and should not be provided without careful consideration of the characteristics of this form of heating and the particular conditions.

45. Ceiling heating systems should conform to the recommendations of the Medical Research Council's Environmental Research Unit which may be found in the "Guide to Current Practice" of the Institution of Heating and Ventilating Engineers.

46. Luminous electric fires or convector jacketed gas fires fitted with suitable guards may be installed in day rooms to provide a focal point for sitting or for use on chilly days in summer.

Ventilation

47. Rooms will normally be naturally ventilated. Internal rooms should be mechanically ventilated to suit their individual requirements. Internal lavatories should have mechanical extract. Mechanical extract at high level to outside should be provided in the ward pantry.

48. External discharges should be carried clear of the building and protected against back pressure from the wind. Air inlet grilles are necessary where the ventilation is mechanical extract only.

Hot and cold water and drinking water services

49. These are normally provided by connection to the main services of the hospital.

50. Hot water storage capacity should be based on meeting the maximum requirements for two hours and the rating of the calorifier battery should be calculated on a three-hour recovery period having regard also to the heat losses from the mains. The cold water storage should be sufficient for 24 hour requirements.

51. Drinking water direct from the mains will be required in the ward pantry and it may be desirable to provide a drinking water tap in toilet suites. Pillar taps should normally be provided but spray mixing taps may be used for lavatory basins en suite with w.c's. Hand sprays are required in utility rooms for (female) hair washing.

52. The hot water circulation system should serve baths, showers, towel-rails, coils in the linen and blanket stores for airing and in the patients' cloakroom for clothes drying. Shower sprays for female patients should be installed at shoulder height.

53. One sink in the ward pantry should be provided with facilities for a hot rinse, but where there is no central wash-up consideration should be given to the provision of a dish-washing machine which rinses at a temperature of 180/190°F.

Town gas

54. A gas service may be required in the ward pantry and utility room.

Fire alarms and fire fighting equipment

55. Information on fire alarms and extinguishers is given in B.S. Codes of Practice and in HM(56)36, Hospital Fire Precautions. Advice on the fire fighting installation proposed should be sought from the local fire authority.

Electrical installation

General

56. The electrical installation will include wiring and equipment for general and special lighting, socket outlets, emergency electrical services, heating, ventilating, telephones, call systems and clocks.

Supply and distribution

57. Generally, the electricity supply will be provided by feeder from the sub-main. Local distribution boards should be sited to minimise the length of circuit wiring. They should be easily reached from a standing position and housed in ventilated locked cupboards preferably accessible from corridors; boards not in locked cupboards should be fitted with

locks. H.R.C. fuses are recommended and in addition to the provision of spare ways and fuses space should be allowed for future additional units.

58. Conduits and cables should generally be concealed, service ducts being provided wherever practicable. External wiring should either be P.V.C. cables in galvanised screwed conduit or M.I.M.C. cables.

Artificial lighting

59. Special lighting will not normally be required; lighting should generally follow standard modern practice and be selected to give a pleasing effect.

60. Lighting fittings should have a low glare index, not be dust collecting and should be readily accessible for maintenance and not difficult to clean.

61. The following table gives recommended values of general illumination (3 feet above floor level) for various rooms:

Accommodation	*Average lumens/ft.² recommended at working level*
Nurse's office, day rooms and interview room	15
Bedrooms, utility room, ward pantry and bathroom	10
Entrance and circulation spaces ...	7*†
Patients' cloakroom and day toilets, staff lavatory and cloakroom, box room, stores and sanitary facilities	7*
Bicycle store	Nominal

62. In addition to normal lighting arrangements individual lights for reading and writing may be desirable in day rooms. In single bedrooms table lamps may be preferred to fixed bed-head fittings to allow more flexibility in the arrangement of furniture.

63. General lighting in multi-bedded rooms should be screened from the beds and any part of a lighting fitting visible from a bed should have a brightness of not more than 1 foot lambert. These restrictions should be applied also to lighting in corridors, circulation space, etc., outside bedrooms but visible from the bed through unscreened glazing.

64. Local lighting, table lamps and bed-head fittings should be separately switched.

65. Lighting fittings on staircases should be sited for easy cleaning and maintenance.

66. Where the building is detached, external and road lighting will be required, and the system should be controlled by a time switch. External lighting fittings should be weatherproof.

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* Standard given is required at floor level.

† This figure may be increased where adjacent intensities are high.

Mains voltage outlets

67. Sufficient 13A. universal type switched shuttered socket outlets, connected to ring or spur circuits, should be provided to allow each portable appliance which is likely to be in use at the same time to be supplied from a separate outlet.

68. Fixed appliances rated up to 13A. may be permanently connected to 13A. fused spur boxes. Appliances rated in excess of 13A. should be permanently connected to separate final sub-circuits and independently switched.

The following socket outlet distribution is suggested:

Day room	2 twin outlets.
Single bedroom	1 twin outlet for general purposes and table lamp.
Four-bedded room	1 twin outlet between beds.
Nurse's office, interview room and utility room	1 twin outlet.
Ward pantry	To suit the number of appliances plus 1 or 2 for future requirements. Outlets should include neon type indicating lights.
Corridors, waiting space	Outlets to be provided to allow for the convenient use of domestic cleaning appliances with flexible lead assumed to be 30 feet long.

69. Non-luminous heating appliances should have a neon type indicating light to show when they are in use; the light may be in either the appliance socket outlet or plug top.

Electric fires

70. Electric fires should be fixed to walls, permanently connected and supplied with approved fireguards.

Emergency electrical services

71. Guidance on the provision of emergency electrical supplies is given in the Ministry's Technical Memorandum No. 11, Emergency Electrical Services.

72. Skeleton lighting grade (*c*) to much reduced standards, but sufficient to allow the free movement of staff, should be provided in general working areas, and skeleton lighting provided for corridors and staircases to enable staff and patients to move about with reasonable safety. Battery-operated lanterns may be provided, and kept in the nurse's office, for use in areas which have no installed emergency lighting.

73. Socket outlets supplied from the emergency electrical service will not normally be necessary.

Telephones

74. Telephone facilities for internal and external calls are required in the nurse's office.

75. A call box or booth with G.P.O. telephone for the use of patients and visitors will normally be available in or adjacent to the main entrance to the hospital.

76. Conduit and trunking for telephone cables should be concealed.

Electric clocks

77. An electric clock will normally be required in the nurse's office and day room.

Staff location system

78. A wired staff location system or a radio induction system may be provided as part of the general staff location system of the hospital. The system should enable staff to be called at night without disturbing the patients.

Television and radio

79. Provision should be made for sets which are usually located in the day room (including dining space). Where external aerials are used it is preferable to provide a common aerial rather than a number of independent ones. Aerial cables should be run in concealed conduit(s). Suitable arrangements for earthing the T.V. and radio set(s) shall be made.

Incinerators

80. Gas or electric incinerators may be included in the female sanitary facilities.

APPENDIX

Recommended minimum areas for rooms in basic accommodation

Description of rooms	*Sq. ft.*
Group (A)	
(i) Entrance	150
(ii) Nurse's office	120
(iii) Staff lavatory and cloakroom	70
(iv) General store	60
(v) Interview room	120
(vi) Ward pantry	200*
Group (B)	
(i) Day rooms and Dining space	27 per patient plus 13 per patient
(ii) Patients' cloakrooms and	120
Day toilets	130
(iii) Cleaners' equipment store	50
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